THE

BRITISH JOURNAL

OF

CHILDREN'S DISEASES.

Vol. XIII. SEPTEMBER, 1916. No. 153.

Original Articles.

A CASE OF GASTRO-ENTERITIS DUE TO B. PROTEUS.

By W. Boxwell, M.D.,

Physician to Meath Hospital and County Dublin Infirmary.

Kathleen H—, a girl aged 6 years, first came under my notice on August the 22nd of last year. I was asked to see her in consultation by Dr. Mather Thomson, as her condition at the time was giving him grave anxiety.

The history of her illness was as follows :—

Her father and mother had been spending part of the summer at a farm in the County Kildare, and during the last days of their stay three members of the family had suffered from attacks of diarrhœa. About a week after their return to Dublin the child Kathleen was suddenly seized one day about noon with a violent pain in her abdomen, accompanied later by vomiting and diarrhœa. As this continued almost incessantly during that day and night, Dr. Thomson was called in. When he saw her on August the 18th she was still in pain and the abdomen was still active, though the vomiting was less. Her temperature was 103° F. and her face flushed. The tongue was heavily coated and dry. He prescribed a castor-oil draught and liquid food only, but had considerable difficulty in persuading her mother that there was anything particular the matter with the child. She attributed her illness to "a feed of green apples" taken on the day before her attack. The child's condition for the next two days—August the 19th and

20th—grew steadily worse. The evacuations were now scanty, but frequent, of a grass-green colour, and occasionally mixed with dark blood. Her temperature rose to 105° F., her pulse to 130, and she was at times delirious. She had been complaining of pain and soreness in her arms and legs, and more than once, her mother said, she had lost for a time all power of moving a limb—now one limb, now another. At this stage I saw her late at night on August the 22nd, five days after the commencement of her illness. Her face and lips were deeply cyanosed; her temperature, taken in the groin, was 104·8° F.; the pulse was 140 and very weak. Respirations 34. She was stuporous. There was no rash of any sort on her skin, and her belly was soft, neither tender nor markedly distended. Her lungs were clear, but the first sound of her heart was muffled. She was passing everything under her. Though stuporous she was not unconscious, and when I turned her over to examine her back she cried a little, as if in pain. That morning she had for a time lost power in her right arm, and when I saw her again next day one of her legs was distinctly weak, but the jerks were present. The vomiting had stopped, the diarrhœa was less, and she seemed a little better, but the temperature was still over 103° F. Two days later, when I saw her again with Dr. Thomson, her condition otherwise was much the same, but she had developed an acute bedsore. It was this complication which induced her mother to allow her to be brought into hospital—a suggestion she had refused point blank after my second visit—the liquid stools and urine, both passed involuntarily, having accentuated the trouble of tending the bedsore. She accordingly arrived at the Meath Hospital on August the 27th. By this time her temperature was becoming very irregular, ranging from 98° F. to 103° F. Her pulse-rate was 110–120; respirations 28. There was albumin in the urine, but no tube casts. With the slower heart a soft blowing murmur was plainly audible in the pulmonary area. Her lungs were still clear. The child had wasted a good deal and was troubled with pain and stiffness in her joints and muscles. She had a deep, angry-looking bedsore over the sacrum. Nothing noteworthy could be found in her blood either morphologically or culturally, but I probably did not take enough blood to give culture a fair chance. There remained the fæces. I brought some down to Trinity College, where I happened to be doing some work on typhoid and paratyphoid cases with Dr. John Speares, and put it through the same routine method as was then being very generally carried out in tracing carriers.

The method, briefly, is to inoculate tubes of peptone water enriched by the addition of a little very dilute brilliant green with an emulsion of the fæcal material.

This dye, like the aniline violets, as pointed out by Prof. McWeeney, has the property of inhibiting the growth of all cocci, and all bacilli, except those which are also Gram negative and particularly favouring the typhoid-colon group. From the brilliant green tubes sub-cultures are made on some medium containing a fermentable sugar and an indicator, this step separating all organisms into two groups: those which do, and those which do not, ferment the sugar in the medium. By this means a bacillus was isolated —evidently present in considerable quantity—a bacillus which, on being grown on other differentiating media, proved to be no member of the typhoid-colon series, but a proteus, one of a group of putrefactive microbes hardly ever pathogenic, and very common. But not being quite sure what it was at the time, I tried the experiment of doing a Widal test with it against the child's serum, using typhoid and paratyphoid strains as controls.

Her serum failed to agglutinate the latter in any dilution within reason, *i.e.* down to 1 in 10, whereas it did agglutinate the proteus rapidly and typically in dilutions up to 1 in 150. This was about the middle of September.

Meantime the bedsore had healed. The murmur had disappeared, but the child was making no real headway. Diarrhœa and vomiting had long since stopped, giving way to most obstinate constipation. I tried all sorts of drugs, besides quantities of liquid paraffin, but the only means of getting satisfactory motions was by enemata. She had developed a sort of periodic fever ranging from 96° to 101–2° F. Her chart was more like a sphygmogram than a temperature record. Her body was wasted to a skeleton, and visible peristalsis could sometimes be seen through her scaphoid and almost transparent abdominal wall. Her eyes were hollow and staring, and her tongue quite clean and glazed. Her legs had become bent up and were growing partially ankylosed. Still her appetite was pretty good, and I had substituted a light nourishing diet with plenty of fruit and cream for the strict fever diet of albumin water, meat-juice and whey of the earlier weeks of her illness. But the fever of an intermittent and periodic type continued. The constipation was as obstinate as ever, and she became so emaciated that the other patients were afraid to look at her. I had made a vaccine from the cultures when I found her blood reacted to the microbe, and I determined to try it. The first

dose, given on October the 4th—only seven millions—nearly finished her. That night she began vomiting again, and though her pulse only rose from 82 to 92, she was very much weaker, and all next day she lay in the stuporous state noted at the beginning of her illness. On the third day she was better again. It may have been a coincidence, but the symptoms recurred in a milder form a week later after a second dose of the vaccine, this time of ten millions. Ten days later, after four days' interval from fever, she had a third dose of fifteen millions. Her temperature rose from 96° to 101° F. fell in twenty-four hours to 97° F., and never again went above normal till she left hospital.

After the next injection her bowels began to act spontaneously, and she very soon looked a different creature, putting on weight and getting her colour back. Her legs straightened out, and she went home quite well on November the 27th. I continued the vaccines each week, giving twenty-five millions as a maximum until she left.

The striking features of this case then were:

The sudden attack of gastro-enteritis, with sharp hæmorrhage from the bowel, and accompanied by high fever and delirium: the pain in the muscles and joints, such as are found in Henoch's purpura: the transient paralysis of the limbs, probably of toxic origin: the acute bedsore: the long-protracted fever of a hectic type with extreme emaciation: the reaction of her blood to a proteus-like organism recovered from her fæces: and the almost dramatic improvement and ultimate recovery after the administration of a vaccine made from this organism.

I think this must have been a genuine case of infection with *Bacillus proteus*. The similarity to cases of severe food poisoning was striking, and that this organism was at least one of the infecting agents was shown by the fact that the child's blood had formed a powerful antibody against it, while the behaviour of the case following the vaccine administration, even if it proves nothing, is at least suggestive. From what source the infection was derived it is hard to say. It is possible that it came from the water at the farm, an ordinary surface well, which had been filled with flood water in the rains of last August. The microbe may have been ingested then, and under the influence of an accidental catarrh brought on by the unripe apples may have become parasitic, and determined the onset of a severe toxæmia. Proteus, however, is a very rare cause of disease; it is not, however, unknown as such.

Note on the Organism.

A small, exceedingly motile bacillus, decolourised by Gram's staining. It grew on ordinary agar, and in broth forming a slight scum after three days.

It formed small colourless colonies on McConkey's Endo, and Conradi plates. It scarcely fermented glucose in Durham's tubes, and lactose not at all.

It produced *no gas* in either.

It grew in milk, *without* curdling, but digested it fairly rapidly. It completely liquefied gelatine after eleven days' growth.

In nearly every important particular this description corresponds with that of *B. proteus*.

A CASE OF PROLONGED HYPERPYREXIA IN A CHILD WITH A MID-BRAIN TUMOUR.

By C. Violet Turner, M.D.Lond.,

House Physician, National Hospital for the Paralysed and Epileptic; late House Physician, Hospital for Sick Children, Great Ormond Street.

The following case is recorded as an unusual instance of prolonged hyperpyrexia associated with a tumour in the mid-brain. The occurrence of hyperpyrexia as the terminal manifestation of cerebral lesions in children is well known, and the extreme variations of temperature which occur in meningococcal meningitis, middle-ear disease, and other infective intracranial conditions, are also well recognised; but the prolonged hyperpyrexia exhibited in the following case would seem to be an unusual manifestation of a mid-brain lesion or its consequent hydrocephalus.

A female infant, aged 1 year and 6 months, was brought to the Hospital for Sick Children, Great Ormond Street, on October the 19th, 1915, on account of "stiffness and unconsciousness."

The history was that of an indefinite failure of health for about six months. Two months before admission the child had stopped talking, become dull and listless, and constipation was troublesome. For two weeks the legs had been stiff and crossed, and the pupils dilated. The child did not attempt to sit up, and collapsed when placed in a sitting position. For the last three days her eyes had become staring, and she did not know her parents. The stiffness

had increased, opisthotonos had been noticed one day before admission, and squint and convulsions on the day of admission. There had been no vomiting and no indication that the child had suffered from headache during the illness.

On admission the child was pale but not wasted. She was quite unconscious, with half-open fixed eyes. The whole body was rigid, and the back arched with some head retraction. All four limbs were rigidly extended, and there was adductor spasm of the legs. There were general convulsive movements of the head, eyes, hands, and feet. Hydrocephalus was present, the circumference of the head being 20¼ in.; the fontanelle was very tense. The pupils were equal, moderately dilated, and inactive. There was slight double internal strabismus. All the deep reflexes were exaggerated; the plantar reflexes were extensor, and the abdominal absent.

The temperature was 103° F., the pulse 172, and respirations 60. Examination of the heart, lungs, and abdomen showed nothing abnormal. Lumbar puncture was performed at once, and about ʒiiss. of clear colourless fluid escaped under great pressure. The fontanelle became soft immediately, and the convulsions ceased shortly after; the eyes opened widely, and there was no squint.

Examination of the cerebro-spinal fluid showed no increase in albumin; there was some immediate reduction of Fehling's solution; no cells were seen, and the cultures were sterile. It was therefore concluded that the symptoms were not due to any form of meningitis, which had been the provisional diagnosis made before the examination of the cerebro-spinal fluid.

The rigidity passed off gradually, and the next day (October the 20th) the limbs were almost flaccid. The child was still unconscious, could not swallow, and was very constipated. The optic discs showed a low grade of optic neuritis.

The following day the spasticity returned, and the fontanelle became very tense. From this time onwards until death, thirty days after admission, the child lay in a state of extreme rigidity in the extended position, the feet in a position of marked plantar flexion, and the thighs adducted. The upper limbs were so rigid that at times they did not rest on the bed; the forearms were persistently pronated so that the palms were turned outwards, and the fingers flexed over the thumb, which was held across the palm. Opisthotonos was only present once—on November the 14th. The jaws were usually tightly clenched, so that the child had to be nasally fed throughout, except on a few occasions when she was able to swallow. Champing movements of the jaw were present at times, and on November the 7th

convulsions recurred. There was no persistent squint. Sometimes there was a double internal strabismus, and sometimes a divergent squint. The pupils were usually moderately dilated, equal, and inactive. On November the 10th the left was noted as being larger than the right. Lumbar puncture was repeated twice (October the 22nd and 29th); neither time was the fluid under such great pressure as on the first occasion, nor did the fontanelle become depressed afterwards. The albumin content of the fluid on October the 22nd was ·025 per cent., and on October the 29th ·06 per cent.; the cells were more numerous than normal, nearly all were mononuclears, and the Wassermann reaction was negative.

The temperature was the most remarkable feature of the case; it was irregular and intermittent throughout, but from October the 23rd to November the 3rd it showed very great variations; once, or sometimes twice, every twenty-four hours it would rise to 105°, 106°, or 107° F., and then rapidly fall, so that in eight or twelve hours it would be normal or subnormal. The maximum was reached on October the 31st, when at 7 a.m. the axillary temperature was 109° F. and the rectal temperature 111° F. Four hours later it was down to 100° F., and in eight hours it was normal. The rises occurred most frequently at 11 p.m., but this was not constant; the temperature never fell below 97° F. The pulse-rate varied in proportion with the temperature; it became uncountable when the temperature was high, and only 80–100 when the temperature was down; the respiration-rate showed corresponding variations. During the last week the respirations were grouped, and became Cheyne-Stokes in character before death.

Diarrhœa, vomiting, and marked wasting were terminal features; for forty-eight hours before death on November the 17th the extremities were icy cold, and the last twenty-four hours the temperature was so low as to be unregisterable by an ordinary clinical thermometer.

Post mortem a solid rounded tumour was found situated in the mid-line in the region of the corpora quadrigemina. The tumour measured 3·25 cm. in the antero-posterior diameter, 3 cm. in the transverse diameter, and 2·5 cm. vertically. It did not involve the pons, optic thalami, or the cerebellum, but was pressing forward into the aqueduct of Sylvius, causing a block, with resulting distension of the third and lateral ventricles. The whole cerebral cortex was thinned from this distension, and there was a small area of softening in the left occipital region.

Microscopically the section of the tumour showed it to consist of

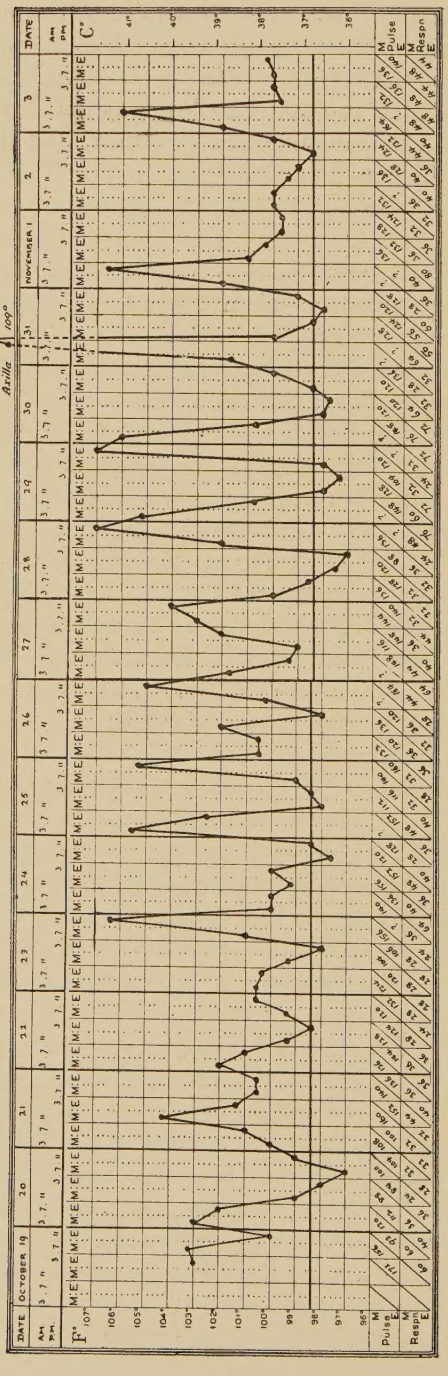
Rectal 110°
Axilla 109°
DATE
OCTOBER 19
NOVEMBER 1
Pulse
Respn
F°
C°

Fig 1.

numbers of round cells, uniform in size, with but little intercellular matrix. In parts the growth had undergone cystic degeneration, leaving a hyaline material without cell elements.

No definite diagnosis of the case was made during life. A cerebral tumour, possibly pontine or cerebellar, was suspected, though the temperature phenomena were unusual in this connection; post-basic meningitis, in which the same type of pyrexia occurs, was

Fig. 2.

considered unlikely on account of the condition of the cerebro-spinal fluid, while thrombosis of the longitudinal sinus was suggested by the combination of hyperpyrexia and rigid diplegia.

I have been unable to find any similar case recorded in the literature, and, apart from the terminal hyperpyrexia of cerebral lesions, there is no mention to be found of any such condition occurring in cases of cerebral tumour.

C. R. Box,* in 1905, described a complex of symptoms corresponding very closely to those in the present case, in connection with posterior basic meningitis. He terms them "crises," and

* "Crises of Posterior Basic Meningitis," 'Trans. Clin. Soc.,' 1905, xxxviii, p. 30.

attributes them to temporary increase in the pressure in the ventricular system of the brain, as in all the five cases he described hydrocephalus was found post mortem ; but he is unable to account either for the coincident rise of pulse-rate or the periodicity of the crises.

I am much indebted to Dr. A. F. Voelcker, under whose care the child was while in hospital, for kindly allowing me to publish the case.

GLANDULAR CARCINOMA OF THE UTERUS IN A CHILD AGED 2½ YEARS.*

By Joseph E. Adams, M.S., F.R.C.S.,

Surgeon, East London Hospital for Children; and Surgeon in Charge of Out-Patients and Children's Department, St. Thomas's Hospital.

History.—For three weeks before admission there had been a discharge of blood from the vagina, steadily increasing in amount and frequency. The child had complained of no pain, but the mother had observed some fulness in the child's abdomen. Bladder and rectum acted normally. There was no history of carcinoma in the family ; the father is aged 28 years and the mother 25 years, and this is their first child.

On admission the child looked well nourished and healthy. Both clots and fluid blood were escaping from the vagina. Examination of the abdomen revealed a palpable tumour in the hypogastrium, situated between the bladder and the rectum, partly cystic in consistency. A catheter specimen of urine contained no blood.

Operation on June the 18th, 1913.—Abdomen opened through left paramedian incision. The recto-vesical space was found to be occupied by a rounded cystic growth about the size of half a tennis-ball, which obscured the position of the uterus but was obviously attached to the roof of the vagina ; blood and clot escaped from the vagina during the operation. The peritoneum over the tumour was incised and a cystic hæmorrhagic mass was entered and a portion was removed, as it was too adherent for complete removal. The peritoneal covering was then sutured and the abdomen closed. The vaginal hæmorrhage ceased for a few days after the operation, but

* A paper read before the Obstetrical and Gynæcological Section of the Royal Society of Medicine on May the 7th, 1916.

then it reappeared and became more abundant; the bladder had to be emptied by catheter, and there was some blood in the urine; the child gradually lost ground and died on August the 24th, two months after the operation.

Post-mortem examination.—The body was well nourished, but showed signs of recent wasting. The peritoneal cavity contained no free fluid, but the bladder was distended with urine, and the coils of intestine were also distended. Occupying the centre of the pelvic cavity was a large growth completely covered by peritoneum, adherent to the posterior surface of the bladder and closely connected with the rectum posteriorly. The operation incision in the peritoneum was firmly healed. Several enlarged mesenteric glands were found and removed for microscopy. There was no evidence of secondary deposits in any of the abdominal organs. Both kidneys exhibited some degree of hydronephrosis. The lungs were broncho-pneumonic, and there were numbers of enlarged glands in the thorax and neck. The pelvic organs were removed entire for further examination.

Pathological Report by Dr. Athole Ross.

Macroscopic appearances.—The specimen consists of the uterus and its appendages, the bladder, vagina, and a portion of the rectum. The sagittal section shows that both body and cervix of the uterus are largely replaced by breaking-down growth, which had extended into the recto-uterine pouch and grown into the cavity of the vagina. In each half of the divided specimen the corresponding ovary and tube are present and intact. The tumour shows a network of supporting tissue and a number of areas where hæmorrhage had obviously occurred. At one spot a small portion of growth is seen protruding through the inner wall of the bladder.

Microscopical appearances.—The growth shows the structure to be a carcinoma with both columnar and cuboidal cells having a somewhat tubular arrangement. It will be noticed that many of these tubules are provided with a capillary and a minimal amount of intervening connective tissue. There are many areas of degeneration, and here the tubular arrangement is lost and the cells are grouped irregularly. The interstitial tissue is small in amount. The growth appears to fall into the group of carcinomata arising in the glandular epithelium of the body of the uterus. Examination of the lungs and bronchial glands proved them to be affected with caseating tuberculosis but unaffected by growth.

Royal Society of Medicine.

LARYNGOLOGICAL SECTION.

March the 3rd, 1916.

Three Foreign Bodies Removed from the Bronchi by Upper Bronchoscopy.—Dr. T. Guthrie.—(1) *Piece of Mutton-bone.*—A boy, aged 10 years, while eating his dinner, was seized with a violent fit of coughing which subsided after a few minutes. Two days later there were rise of temperature, cough and expectoration, and signs of pneumonia gradually developed in the left lung. Nine days after the accident, upper bronchoscopy under general anæsthesia showed the bone lying in the left bronchus about $\frac{1}{3}$ in. from its orifice. Removal by means of Brünings' forceps was followed by rapid recovery.

(2) *Piece of Metal Pencil-case.*—The patient was a boy, aged 11 years. A piece of a broken pencil-case had been inhaled on the previous day and lay with its hollow end upwards in the branch of the main bronchus leading to the lower lobe of the right lung. The only difficulty consisted in the fact that on grasping one edge of the object with Brünings' forceps its opposite sharp margin tended to become embedded in the bronchial mucous membrane.

(3) *Glass-headed Pin.*—The patient was a girl, aged $3\frac{1}{2}$ years. The pin, which measured slightly over 2 in. in length, lay head downwards in the left main bronchus, the point being at the carina. It was said to have been "swallowed" two days previously. Removal was effected by means of Paterson's forceps passed through a 5 mm. tube.

Bilateral Dacryocystitis in a Syphilitic Child.—Mr. C. Potter.—Girl, aged 12 years. No history was obtained as the child was sent from a workhouse infirmary. On examination, both sides of the nose were full of offensive-smelling crusts and the septum was almost completely gone; there was atresia of the left nostril and scarring of the post-pharyngeal wall. The uvula was absent.

Philadelphia Pediatric Society.

March the 14th, 1916, Dr. John F. Sinclair, President, in the Chair.

Pyelo-cystitis, and Metastatic Abscesses, following Tonsillitis.—Dr. H. Brooker Mills and Dr. George A. Sowell.—A boy, aged 2 years, was taken ill on December the 9th, 1915, with tonsillitis, from which he recovered in three days. On December the 16th the temperature suddenly rose to 103° F. Fever continued for several days and then dropped to normal

for several days, when it suddenly rose again. On December the 27th the patient was admitted to the Samaritan Hospital, where the physical examination was found to be negative, except for some swelling on the instep of the left foot, at the metatarso-phalangeal joint of the right big toe, and the dorsal surface of the left hand. All these swellings subsequently developed into abscesses, which were opened and drained a few days later.

Examination of urine at this time showed albumin, many pus cells, and a few red blood cells, but no casts. The leucocytes were 18,000 with 72 per cent. of polynuclear cells.

The Widal and paratyphoid tests were negative. Staphylococcus albus was obtained from the pus from the abscesses, from the urine, from the blood cultures, and from the tonsils when they were removed.

Dr. Mills and Dr. Sowell felt it was proved pretty conclusively that the tonsillitis was in part, if not entirely, the ætiological factor in producing the pyelo-cystitis, while the metastatic abscesses were complications of the latter.

Composite Weight Charts of Breast-fed, Partial Breast-fed and Bottle-fed Babies.—Dr. William N. Bradley.—These babies were all weighed undressed, on a scale which could be accurately balanced to a quarter of an ounce. The charts represented all the babies under one year, cared for from October the 1st, 1914, to October the 1st, 1915. No allowance was made for illness, such as colds, coryza, bronchitis, pneumonia, or diarrhœa; nor for any cases of chronic diseases. In other words, they were not selected cases.

The artificial feedings prescribed for these babies were all diluted milk, with malt sugar, and were given in such strength and quantity as suited the needs of the individual baby. They all had ignorant mothers, 90 per cent. of whom were Italians; therefore simple mixtures were necessarily prescribed, as teaching complicated by home modification in these instances would be absolutely impossible. These cases were all followed up very systematically by nurses who visited the home usually once a week.

The curves were made from the individual charts of all the babies coming to the Starr Centre. All those of the same age were averaged in order to construct the composite curve, and they were compared with the normal weight curve suggested by Dr. J. P. Crozer Griffith.

There were 417 babies entirely breast-fed, 146 bottle-fed, and 87 partly breast and partly bottle-fed. In studying the charts it was noticed that the breast-fed babies corresponded with the normal curve from 6 to 9 months and then averaged a somewhat higher weight than normal, but at about 11 months failed to gain on breast milk alone. Dr. Bradley considered that this was quite conclusive evidence that at this time they should be started on supplementary foods. Entirely bottle-fed babies did not come up to the normal weight until the eleventh month. Partly breast and partly bottle-fed babies reached normal at about 8 months.

In 1912 only 48½ per cent. of the babies were breast-fed. By doing everything possible to induce the mothers to prolong breast-feeding this percentage had been raised in two years to 73 per cent.

The Value of Wassermann's Test in Mentally Deficient Children—An Inquiry of Seventy-five Cases.—Dr. Alfred Gordon.—After comparing the knowledge of specific involvement of the nervous system

before and after the Wassermann era the author pointed out the practical importance of the subject from a therapeutic standpoint. He then gave a detailed account of his personal study of seventy-five cases of mental defects of various degrees, and came to the conclusion that some of these cases were amenable to treatment and improvement. The detection of cases with positive Wassermann test in the blood-serum and spinal fluid was highly important. Every child whose mentality, with or without the Binet-Simon test, demonstrated a mentality below normal; also every child who presented no external evidence of syphilis, but who suffered from various neurotic phenomena as well as from typical epilepsy; also all imbeciles and idiots, should be submitted to a Wassermann test.

The author found that considerable improvement might be obtained in some cases when salvarsan was promptly and early enough applied. He had found a large percentage of positive blood tests in mentally defective children, and therefore the value of such tests was enormous from a practical standpoint.

Dr. Gordon said that in many series there had been 20 per cent. of positive reactions reported, and in some series the percentage was as high as 50 or 60.

With the present improvement in technique, Wassermann reactions were much more reliable than formerly.

With a history of tuberculosis, alcoholism and syphilis in the same family it was very hard to determine which of these factors was instrumental in causing feeble-mindedness. If, however, the patient gave a positive Wassermann he felt that treatment should be instituted, and if some of these cases improved there was sufficient justification for treating them. In his opinion iodides were very beneficial and should be used in such cases.

Fever in Philadelphia during 1915.—Dr. Maurice Ostheimer stated that 1072 cases of scarlet fever had been reported to the health authorities in 1915, 100 more than one half the number reported during 1914 (1944), and less than a third as many as in 1913 (3400). This was a morbidity rate of 64 per 100,000 as compared with 117 in 1914 and 208 in 1913. August, 1915, had only 29 cases; December, 147 cases. Of the 1072 cases, 529 were male (513 boys) and 543 female (501 girls). This left only 58 adults who contracted scarlet fever during 1915. Seventy-five per cent. of cases were reported to the health authorities within three days of illness; 90 per cent. within five days.

Distribution of Scarlet Fever by Districts, 1915.

Central Philadelphia, 6 wards	27 cases, or	4·5	per ward.
Frankford, 3 large wards	21 ,,	7	,,
North Philadelphia, 21 congested wards	439 ,,	21	,,
West Philadelphia, 6 large wards	160 ,,	27	,,
South Philadelphia, 9 congested wards	282 ,,	31	,,
Germantown, 3 large wards	143 ,,	48	,,
Scarlet fever cases removed to hospital	625	(58·3	per cent.)
Deaths in hospital	21	(3·4	,,
Scarlet fever cases treated at home	447	(41·7	,,
Deaths at home	5	(1·1	,,

Secondary Cases of Scarlet Fever:	
When primary case remained at home	117 (10·9 per cent.)
When primary case in hospital	31 (2·9 „
Hospital return cases	33 (3·1 „
Late secondary cases	3 (0·28 „
Total secondary cases	184 (17·18 „
Contact known in school	100 (9·3 „
Contact known elsewhere	117 (10·9 „
Total cases with known contact	401 (37·4 „
Isolation in Scarlet Fever:	
Good, with trained nurse	112 (10·4 „
One person nurse, another housekeeper	279 (26·1 „
Same person nurse and housekeeper	681 (63·5 „

The last figures included most of those cases which later were removed to the hospital.

Scarlet fever during 1915 was remarkable for the following reasons:

(1) The lowest number of cases reported during any one year since 1900 when accurate statistics were first begun, 1072 cases.

(2) The lowest number of cases removed to the hospital during any one year, 447.

(3) The lowest number of deaths from scarlet fever during any one year, 26 deaths, 2·4 per cent.

(4) The lowest death-rate per 100,000 during any one year, 1·5.

(5) The lowest number of deaths occurring in the hospital during any one year, 21 deaths, 3·3 per cent.

(6) The lowest number of deaths occurring among cases treated at home during any one year, 5 deaths, 1·1 per cent.

Abstracts from Current Literature.

Feeding of Infants and Children.

Breast-feeding: some functional requirements of the gland and of the infant (*'Lancet,'* 1915, II, *p.* 115).—**H. K. Waller** emphasises the necessity for the institution of normal, uninterrupted, and successful breast-feeding until an age at which milk no longer forms the chief constituent of the infant's diet, and discusses the importance and need for correlation between (1) the periodicity in the secretion of milk, (2) the size of the meals, and (3) the infant's appetite. J. Allan.

Some points in the management of breast-feeding (*'Arch. of Ped.,'* 1915, xxxii, *p.* 35).—**F. Van der Bogert.**—Loss of weight in babies on the breast should be counteracted by the addition to the dietary of one or more bottles of cow's milk. Absence of milk from the breast demands similar treatment. Skin eruptions, loose bowels, irritation of the buttocks, and colic, are caused by overfeeding and indigestible milk. The indications are

therefore to feed at regular intervals, and to regulate the life of the mother, by giving her three good nutritious meals a day. Acute diseases in the infant, such as pneumonia, should be met by drawing off the mother's milk and then feeding the patient with it. CHRISTOPHER ROLLESTON.

The influence of menstruation on breast milk (*'Amer. Journ. Dis. Child*,' 1915, IX, *p.* 374).—**C. G. Grulee** and **F. C. Caldwell.**—A baby born with a hare-lip and cleft palate was nursed for nine months by a specially devised breast pump, which Caldwell describes (*ibid.*, *p.* 381). The mother's menstrual period began six weeks after birth, and continued through her nursing. A distinct relation was found between the quantity of breast milk and the occurrence of the menstrual period. There was a period of increase of breast milk beginning with the first day of menstruation, and lasting for ten days to two weeks thereafter. There then occurred a diminution in the quantity, which reached its minimum four to seven days previous to menstruation. J. D. ROLLESTON.

The passage of alcohol through the mammary gland (*'Riv. di clin. pediat.*,' 1915, XIII, *p.* 693).—**G. Frontali,** from his experiments on goats, women, and infants at the breast, finds that alcohol passes into the milk both in women and goats, and the curve of elimination is the same in both cases. Elimination is appreciable 5 to 15 minutes after ingestion, and reaches its maximum 1½ to 5 hours afterwards, then decreases rapidly, and ceases after 5 to 26 hours. The duration of elimination increases in proportion to the amount of alcohol taken. The maximum concentration of alcohol in the milk increases in a degree greater than arithmetical progression following the ingestion of 1, 2, 3, and 4 c.c. of absolute alcohol per kilogram weight of animal. For a greater quantity than 5 c.c. it diminishes. The amount of lacteal secretion decreases with the increase of alcohol concentration. The total elimination is always below 2 c.c. absolute alcohol in 24 hours. The administration of 2 c.c. alcohol per diem to healthy infants (for two weeks), and to spasmophilic infants (for 9 to 11 days) produced no noticeable effects. VINCENT DICKINSON.

Some essential points in infant feeding (*'New York Med. Journ.*,' 1914, C, *p.* 921).—**E. S. Rimer.**—Five food elements are absolutely necessary to the growing child—fat, sugar, proteid, mineral salts, and water. Fats are the most important source of animal heat, and are necessary to the development of bone and nerve. Their caloric value is more than twice that of sugar or proteid. Fat forms 20 to 30 per cent. of the fæcal mass. Its starvation produces nitrogenous waste. Excess of fat appears as fat curds in the stools, which become pasty white; this excess may become harmful when the fat-splitting enzyme is deficient. Sugar cannot replace waste, but supplies body heat, and is readily converted into body fats. Continued excess produces intestinal fermentation, with gas and sour, watery stools. Proteid is a tissue builder, and repairs waste of cellular tissue. Salts, such as phosphates of lime and magnesia, are demanded by the rapid growth of the skeleton; they are abundant in both human and cow's milk. Feeding by caloric values of food must be done with care, and with an appreciation of the individual peculiarities of the infant. The normal breast-fed baby varies greatly in the amount ingested at different times while in perfect health. It is wiser to be guided by clinical observations of general contentment, with normal stools and reasonable gain in weight. Rimer emphasises

the importance of fresh, clean, raw milk in feeding, with its vitamines, hormones, and natural ferments intact; but all milk not above suspicion should be sterilised or pasteurised. He ends by discussing the effects of overfeeding and the bacteriological diseases caused by milk.

J. Porter Parkinson.

Artificial feeding of infants (*'New York Med. Journ.,'* 1915, cii, *p.* 1188).—**I. H. Goldberger** suggests that artificial feeding of infants is made too complicated. He discusses it under four headings: Quantity, strength, frequency, and the formula. (1) Quantity. This should be 1 oz. more than the age of the child up to seven months, and never more than 8 oz. altogether, after which soft diet should be started. (2) Strength of feeds. At birth to one month there should be given 1 per cent. whole milk with 5 per cent. sugar, which gives 1 per cent. fat, 6 per cent. carbohydrate, and 1 per cent. proteid. There should be a gradual increase of 0·1 per cent. in the percentage of fat and proteid each week so that at two months it is 1·4 per cent. fat, 6 per cent. carbohydrate and 1·4 per cent. proteid, and at three months 1·8, 6, and 1·8 per cent. respectively. (3) Frequency. It has been shown that in bottle-fed infants milk passes out of the pylorus in three hours, and the writer recommends this interval between feeding at all ages, giving seven bottles daily, including one night feeding. From six to nine months five bottles at four-hour intervals are given, and after that night feeds are omitted. The great point is punctual feeding. (4) The formula employed contains 3 per cent. fat, 7 carbohydrate and 3 proteid, made of 30 oz. whole milk, sugar of milk 2 oz., lime water 2 oz., barley water 8 oz. This is a suitable mixture for a child of six months old. From this the other percentages may be calculated. Infants should not be fed entirely by rule, but attention should be paid to individual peculiarities. Examination of the stools should be made from time to time, and the infants should be weighed each week, a gain of 4 oz. to 6 oz. a week being a good average. Orange or prune juice should be given daily as a preventive of scurvy. If the child be constipated, malt sugar or dextrimaltose should be given instead of lactose. A small amount of zwieback or cream of wheat may be given in the seventh month, and at eight months a little meat broth with vegetables. J. Porter Parkinson.

Sanitary study of condensed milk (*'New York Med. Journ.'* 1915, cii, *p.* 1073).—**W. H. Park, M. C. Schroeder** and **P. Bartholow** conclude that the minimum standard of milk suitable for condensed milk should be definitely enforced. The present method of production leads to a wide difference in the finished product. Most condensed milks have a high bacterial count owing to growth of organisms left alive after the heating process or added by contamination. Steps should be taken to make standards to cover the following points: Quality of the milk used, chemical and bacteriological; the sanitary conditions of the manufacture; prevention of bacterial infection after condensing; chemical and bacteriological requirements of the finished product; statements on label showing approximate percentage composition. The clinical conclusions are: The value of condensed milk depends on the care and cleanliness of its manufacture. There is a want of evidence that the bacteria or chemical constituents affect the health, but only the best quality is recommended for infant feeding. Sweetened condensed milk, properly prepared from whole milk, has value as an infant food, in those children who are unable to digest the fat of cow's

milk. Sweetened condensed milk is constipating, and there is no evidence that it produces diarrhœa. Intestinal irritation caused by milk is an effect of the liquid portion when freed from fat, sugar and protein. Sugar appears to have a food value superior to fat as shown by Hellenson.

J. Porter Parkinson.

Homogenised milk, its possible application to infant feeding (*'Boston Med. and Surg. Journ.,'* 1915, clxxiii, *p.* 13).—**Maynard Ladd.**—Homogenisation of milk means the application of great pressure whereby the fat globules are crushed and torn and so incorporated with the other elements of the milk that they can no longer separate from the other constituents of the liquid. Milk so treated keeps sweet almost indefinitely, and is far more readily absorbed than ordinary milk. Artificially fed infants are frequently intolerant of the fats of cow's milk, although they thrive on human milk, which contains more fat than that of the modified cow's milk given to babies. The author has tried an homogenised mixture of olive oil and malt soups in such cases. One case of persistent vomiting gained 2 oz. a day for three weeks, and in another of persistent wasting during the second year of life 22 oz. were gained in ten days.

Christopher Rolleston.

The electrical treatment of milk for infant feeding (*'Journ. State Med.,'* 1916, xxiv, *p.* 97).—**J. M. Beattie** briefly reviews the experimental researches regarding the electrical treatment of milk, and gives an account of the practical working of a large scale plant erected for this purpose in the Liverpool Corporation Milk Depôt at Earle Road. He summarises the results obtained at the Earle Road Depôt, which are confirmatory of the results obtained with the experimental plant, as follows: (1) This electrical method of treating milk will destroy the disease-producing bacteria which are found in it. (2) The main milk-souring bacteria are either completely destroyed, or, if some members of this class are left, they may be neglected as far as the keeping power of the milk is concerned for ordinary household use. (3) The milk is not sterilised in the strictest sense of the word, but there is a reduction in the total number of bacteria by 99·93 per cent., and it is pointed out that even in heat-sterilised milk and in pasteurised milk the whole of the bacteria are not destroyed, for the reason that some bacteria resist boiling temperature for some minutes, and that at temperatures below the boiling-point they may resist for prolonged periods. This difference is, no doubt, also exhibited towards electricity. (4) The milk will keep perfectly sweet for at least three or four days after treatment, and this period will cover distribution and use in all cases of household milk supplies. The keeping power is much prolonged if the milk is protected from after-contamination. (5) The chemical constitution of the milk, as indicated by the reports of the City Analyst, is, so far as can be ascertained by chemical analysis, unimpaired, and the taste is not in any way altered. The milk, from this point of view, may be described quite accurately as "raw milk." (6) As will be seen from the paragraphs relating to animal inoculation, the milk is not only rendered non-pathogenic as regards ordinary bacteria, but in cases in which the control supply was tuberculous the electrically-treated milk was non-tuberculous. (7) The milk after treatment is, in his opinion, perfectly satisfactory as a food for infants.

J. Allan.

The citrated whole-milk method in the feeding of infants (*'Practitioner,'* 1916, xcvi, *p.* 144).—**E. Pritchard** considers this treat-

ment is unsound as it does not permit of any adaptation to the child's digestive powers, and gives little scope for the study of variations on the diet. He considers dried milk has all the advantages and few of the disadvantages of dairy milk. F. R. B. Atkinson.

The use of undiluted citrated milk in the feeding of infants ('*Practitioner*,' 1916, xcvi, *p.* 154.—**R. Carter** has had good results with undiluted citrated milk, but has had better results by abandoning routine methods and concentrating more on the individual requirements of the patient. F. R. B. Atkinson.

Experience with malt soup for institution marasmus ('*New York State Journ. Med.*,' 1915, xv, *p.* 345).—**T. S. Southworth** speaks enthusiastically of the value of malt soup mixtures as a life saver, or at least prolonger, of life, in marasmic infants. Flocculent white and green stools, as a rule, become smooth and brownish within 24 to 48 hours. Infants who seemed doomed ceased to lose weight, and in many instances promptly showed moderate gains. The change in the character of the stools is the most encouraging feature of malt soup feeding. The author discusses the rationale of this treatment, and also deals with its scientific application.

J. Allan.

Recent observations in the use of soy bean in infant feeding ('*New York State Journ. Med.*,' 1916, xvi, *p.* 83).—**J. F. Sinclair** first employed soy bean, because of its high protein and fat content, as a weak gruel to replace barley water, tea, and other liquids in gastro-intestinal disturbances in an effort to check the weight losses which occur so frequently. In this it has proved most efficient. He has used it in seventy-four cases of infants under three years of age who were ill with summer diarrhœa. His custom was to place the infant on soy bean gruel at once upon admission to hospital, and to add no milk until the stools appeared markedly improved. Then milk was added cautiously to the gruel as the condition of the stools warranted the increase. In no case has any bad result been noted from the use of soy bean. The author strongly urges its usefulness in the treatment of summer diarrhœa, in various intestinal disturbances, and in marasmus. It is well borne, readily digested, and by reason of its fat and proteid content furnishes the necessary pabulum to nourish the sick infant.

J. Allan.

The influence of posture on digestion in infancy ('*Amer. Journ. Dis. Child.*,' 1915, ix, *p.* 261).—**G. H. Smith** and **L. H. Le Wald** recommend the following routine in feeding every infant. Before feeding he should be held upright. The erect posture favours the eructation of air, while the horizontal prevents it and is thus an important cause of vomiting, colic, indigestion, and disturbed sleep. Immediately after feeding he should again be held up against the shoulder of the mother or nurse and may be patted on the back or be pressed gently in the epigastrium to encourage eructation. After eructation he should be put down to sleep, preferably in the prone position and with the head of his bed raised. Habitual tongue-suckers must be held up several times between feedings as they constantly swallow air. Feeding should be given at as long intervals as possible, depending on the gastric capacity and total daily requirements. A feeding should not be taken too slowly, 5 to 10 minutes are enough as a rule; 15 minutes should be a maximum time at bottle or breast.

J. D. Rolleston.

The amount of free hydrochloric acid in the gastric contents in infants (*'La Pediatria,'* 1915, XXIII, *p.* 167).—**G. Finizio** finds that an infant's gastric contents taken 30 to 60 minutes after suckling do not show any free hydrochloric acid. This fact is also observed in the adult after a milk meal, and owing to its power of neutralising large quantities of HCl. In a series of experiments subjecting human milk to the action of pepsin with deficiency of HCl he observed that the digestion of proteids took place even in such conditions, and increased in proportion to the decrease in the deficiency of HCl; there was no sudden passage in the intensity of digestion between experiments with a minimum deficiency of free HCl and those with free HCl. In another series he studied the modifications of peptic digestion in proteids of cow's milk subjected to a variable quantity of HCl and constant quantities of rennin. The result was that the more the curd was acted upon by HCl the more it was digested. In a third experiment on the gastric contents taken 15 to 30 minutes after a feed he calculated the quantity of nitrogen in the soluble substances after digesting it for three hours. The amount in the gastric contents immediately after it was taken was 0·055 gr., and after three hours 0·208 gr. From these experiments the author concludes that the absence of free HCl in the gastric contents of an infant in the first hour after a feed does not prove that the gastric digestion of proteids is deficient. VINCENT DICKINSON.

Nuts and fruits: their value in the diet of children (*'New York State Journ. Med.,'* 1916, XVI, *p.* 153).—**G. D. Scott** emphasises the nutritive and dietetic value of nuts and fruits for children. Fruits are given to infants and children for the following reasons: (1) They are appetising and palatable; (2) they are very refreshing; (3) on account of their nutritive value; (4) on account of their salts; (5) on account of their diuretic action; (6) on account of their laxative action; (7) on account of their tonic action; (8) on account of their anti-scorbutic action. The nutritive qualities of fruits and nuts are not to be depreciated, they are not to be given to the child as a pleasurable and luscious appetiser only, but as a food, an addition to the general diet, stimulating, nourishing and exhilarating the child to a stronger mental and physical existence. J. ALLAN.

Some remote effects of bad feeding (*'New York State Journ. Med.,'* 1916, XVI, *p.* 150).—**F. Van der Bogert** maintains that many of the ills of childhood may be attributed to bad dietetic management, and he suggests that, were the dietetic histories of all patients seen by the physician more carefully studied, many a home made unhappy by sickly, irrepressible children would be brightened, the task of many a teacher lightened, many a diagnosis of tuberculosis found to be erroneous, many a belly left unopened, and infectious diseases saved a fatal termination, and most of this without the administration of drugs. J. ALLAN.

Diseases of Liver and Pancreas.

Acute yellow atrophy of the liver in a child of four (*'Journ. Amer. Med. Assoc.,'* 1915, LXV, *p.* 330).—**W. H. Mayer** reports the case of a female child, aged 4 years and 2 months, who was treated for symptoms suggestive of catarrhal jaundice for three weeks. Suddenly, however, the icterus deepened markedly, the pupils became widely dilated, and the patient was very irritable. The liver, which previously could not be felt, was now

palpable three finger breadths below the costal margin, the temperature was 98° F., and the urine contained a marked cloud of albumin. The patient grew very restless and complained of severe abdominal pain; the pulse became more rapid, and the temperature was subnormal. The abdomen became markedly distended, and the liver increased further in size. The next day there was maniacal delirium followed by coma, and hæmatemesis occurred. The liver margin had receded and by 6 p.m. was no longer palpable. The pupils remained widely dilated, and the temperature was subnormal until several hours before death (thirty-six hours after the onset of the acute symptoms), when it rose to 103° F. At the necropsy, hæmorrhages were found in the peritoneum and intestines. The liver was about the normal size; the surface was a light red and several large areas of hæmorrhage were present under the capsule. On section the tissue was friable and of a yellowish colour and contained punctate hæmorrhages. Microscopically, there was acute yellow atrophy, though the degeneration was only partial in certain areas. The kidneys showed an acute nephritis.

T. R. Whipham.

Congenital cirrhosis of the liver (*'Interstate Med. Journ.,'* 1916, xxiii, *p.* 14).—**C. H. Dunn** records the case of a male infant, aged 3½ weeks, who was admitted for jaundice and distension of the abdomen. The family history was good. The child was breast-fed and on the fifth day the stools were greenish and undigested, and there was fever, which lasted for five days. On the twelfth day jaundice appeared and Allenbury food without milk was given. The icterus increased and the abdomen became distended and shiny with prominent superficial veins. The liver edge was 5 cm. below the costal margin and œdema was present in the abdominal wall and in the legs. There was a leucocytosis of 35,000. The urine contained much bile, but the stools were free. Enemata failed to relieve the distension, so the abdomen was opened, when a large amount of bile-stained fluid escaped. The liver appeared large, dark red, and of rough surface. The gall-bladder was normal in size and was opened and drained. No other abnormality was found. Subsequently the abdomen again filled up and was tapped, but the child died the same evening. At the necropsy there was no obstruction in either the common or the hepatic duct. Microscopically a diffuse increase in the connective tissue was found, extending between the lobules, into the lobules, and even about the central veins with marked degeneration of the liver cells. The bile-ducts were increased in number and dilated, but did not contain bile-pigment. The condition was not entirely incompatible with syphilis, but no other evidence of the disease was found. The spleen was rather large and soft and showed no appearance of Malpighian bodies. The kidneys were congested and contained infarcts.

T. R. Whipham.

Congenital syphilitic cirrhosis (*'Dub. Journ. Med. Sci.,'* 1916, i, *p.* 358).—**J. H. Pollock**, at a meeting of the Royal Academy of Medicine in Ireland, Section of Pathology, demonstrated a specimen of the above obtained from an infant, aged 11 months, who succumbed to an apparently primary hepatitis. Cellular infiltration of a diffuse nature, together with gummatous formations, was present. This histology was typical, and spirochætes were demonstrable by Levaditi's method. He thought it possibly unusual to see a liver in this precise condition, as such cases usually either died during intra-uterine life or survived sufficiently long for fibrotic

changes to occur. He also showed a specimen of testicular gumma and a preparation of spleen from a macerated fœtus, exhibiting *Spirochæte pallida* in extreme numbers. J. Allan.

Perforation of the biliary tract (*'Journ. Amer. Med. Assoc.,'* 1915, lxv, *p.* 2084).—**H. L. Beye** reports the case of a boy, aged 11 years, who received a blow on the abdomen which was followed by pain, vomiting, constipation, and rise of temperature. The next day he presented all the appearance of "acute abdomen," and the leucocyte count was 21,300. A diagnosis of ruptured appendix and general peritonitis was made. At the operation the abdomen was found to contain a large amount of bile-stained fluid and fibrin. The proximal half of the small intestine was distended, and the distal half collapsed. No perforation of the intestines was discovered, and on the incision being carried upwards the gall-bladder was found to be thickened and adherent to the liver, and contained a simple perforation in the fundus from which bile was pouring. No stones were found. The wound was drained and the patient made a good recovery. Two months previously the boy had received a similar injury, after which he was sick and feverish for three days, but subsequently was apparently perfectly well. The relationship between the chronic cholecystitis and this injury is problematical. There might at that time have been an acute cholecystitis which was followed by change predisposing to perforation or a perforation with localised peritonitis which resolved. There was no history of typhoid fever or tonsillitis. T. R. Whipham.

Pancreatic cysts (*'El Siglo Méd.,'* 1916, lxiii, *p.* 114).—**L. Urrutin.**—These are divided into true cysts (cysto-adenomata or cysto-epitheliomata) and pseudo-cysts. The latter are much commoner, have no epithelial investment, and are usually produced by partial necrosis of the pancreas due to inflammation or trauma. Urrutin records a case in a female infant, aged 29 months, following a fall on the abdomen. Complete recovery followed laparotomy. J. D. Rolleston.

Pancreatic infantilism (*'Edin. Med. Journ.,'* 1915, i, *p.* 323).—**Byrom Bramwell** gives in detail the clinical history of a case of pancreatic infantilism (seen first in 1901) cured by the administration of pancreatic extract. The characters of pancreatic infantilism are: Arrested bodily and arrested sexual development; intelligence good, no mental defect; no deformity or structural defect of the bones; no visceral disease or derangement except chronic diarrhœa, flatulent distension of the abdomen, and defective or arrested pancreatic secretions. The defective or arrested pancreatic secretion is probably due to chronic pancreatitis. In some cases the condition (chronic diarrhœa and infantilism) is completely cured by the administration of pancreatic extract, and by that treatment alone. In the present case the result of treatment was remarkable improvement both as regards the diarrhœa, the bodily development and growth, and the sexual development. (1) Before the pancreatic treatment was commenced there were, on the average, five or six loose motions daily. As the result of the treatment the diarrhœa was arrested. During the first eighteen months after the treatment was commenced there were two motions on an average daily, one of which was formed; since that time there has been only one motion daily, formed and perfectly normal. (2) Before treatment the patient had not grown at all for eight years. After the treatment he gradually commenced to grow. (3) The sexual development, which when

the patient came under observation was quite infantile, gradually became complete. (4) The patient lost his child-like appearance; his voice, which was high-pitched and childish, became low-toned and rough. The author adds brief notes of other recorded cases of pancreatic infantilism, and appends notes of two cases of infantilism associated with diarrhœa, which he considers appropriately described as cases of "gastro-intestinal" infantilism.

J. Allan.

Surgery.

The surgical anatomy of cleft palate (*'Journ. Amer. Med. Assoc.,'* 1915, lxv, *p.* 915).—**J. R. Eastman**, in a paper which is well illustrated, draws attention to the danger of dividing both divisions of the descending palatine artery by incisions too far medial from the alveolar process, and thus cutting off the blood supply to the flaps. It is best to avoid lateral incisions if possible, or if they are absolutely necessary they should be made after the flaps have been elevated and the lines of tension determined. In this way small incisions properly placed only are required, and care can be taken to avoid both the ascending and descending palatine vessels, as well as the palatal nerves. Numerous other hints concerning the performance of the operation are also given.

T. R. Whipham.

Hagedorn's operation for double hare-lip (*'Lancet,'* 1916, i, *p.* 136).—**T. Bates, Jun.**, reports a case of double hare-lip in a boy, aged 14 years, treated by Hagedorn's operation. The premaxillary bone was removed, and the section of the lips made with a sharp-pointed tenotomy knife, sutures of silkworm gut being passed through and through. Illustrations show the condition before and after operation, and the steps of the operation itself.

J. Allan.

Hæmangioma of the parotid (*'Riv. di clin. pediat.,'* 1915, xiii, *p.* 541).—**U. Trinci** describes five cases of this condition, which is a congenital affection and generally develops early in extra-uterine life, being met with usually below one year of age, rarely as late as the third. The course is usually rapid and there is a slight prevalence in favour of the female sex. The tumour is usually the size of a nut or a small egg, with the larger axis vertical. The overlying skin is healthy but reveals a bluish colour underneath with delicate venous ramifications. It is slightly lobulated and of elastic consistence. There is a tendency to rapid growth and to implication of other glands. Partial or total removal of the parotid is indicated.

Vincent Dickinson.

Two cases of mesially situated cysts in children (*'Liverpool Med.-Chir. Journ.,'* 1915, xxxv, *p.* 308).—**H. Armstrong**.—Case 1: Male infant, aged 6 months. The mouth was widely distended by a globular tumour resembling a big purple plum. It proved to be a mucous cyst situated centrally in the free apex of the tongue. It had been present at birth and had gradually increased in size. Under chloroform the cyst was incised vertically, and a clear glairy fluid was evacuated and the thin wall of each half was dissected out, the now bifid tongue being united with silk sutures. In a few days it was impossible to tell that the tongue had been affected, but the lips took much longer to resume their normal contour after their prolonged distortion. Case 2: Girl, aged 4 years, presenting a sessile tumour situated centrally and extending for $1\frac{1}{2}$ in. from just above the

clitoris into the mons veneris. It had grown rapidly from its first appearance only six or eight months previously. The tumour was dissected out and found to be a simple mucous retention cyst. J. D. Rolleston.

Gastrotomy in a baby aged 6 months (' *Lancet*,' 1916, i, *p.* 189).—**C. P. G. Wakeley.**—The patient, a female infant aged 6 months, swallowed an open clasp-brooch two days before being admitted to hospital. A radiograph showed the brooch lying in the lower third of the œsophagus, the brooch being open with the head of the pin projecting towards the mouth. An attempt was made to close the brooch with the aid of a bronchoscope, but it was pushed down into the stomach, as was verified by a second X-ray photograph. The condition of the patient was not very good. She had not taken the breast well since the brooch had been swallowed, and had vomited at intervals. The next day she became very collapsed, but her condition improved on subcutaneous saline infusion. However, her temperature suddenly went up to 107·2° F., pulse 192, and respirations 84. It was decided to operate. The foreign body was removed through an incision in the long axis of the stomach. The interior of the stomach was very congested and in a semi-ulcerated condition. The stomach wound was closed by Czerny-Lembert sutures, and the abdominal wound closed without drainage. The baby was kept in a tent bed for the next five days and was fed by her mother twelve hours after the operation. A drachm of the following mixture was given every four hours for the first five days after the operation to relieve the ulcerated condition of the stomach: Bismuth. carb., gr. v.; sod. bicarb., gr. iss.; spt. chloroform., ℥i; pulv. tragacanth., gr. $\frac{1}{8}$; aq. ad. ʒi. The child was fed by the mother every four hours night and day; she vomited slightly after the operation. The abdominal wound healed well, and the patient left hospital three weeks after the operation with a normal temperature and pulse. The hyperpyrexia on the day of the operation was very interesting, and the child was very fortunate to pull through after such a condition.

J. Allan.

New methods of pyloroplasty for congenital pyloric stenosis (*'Journ. Amer. Med. Assoc.,'* 1915, lxv, *p.* 1533).—**A. A. Strauss** states that in spite of the remarkable results obtained by Richter and Scudder posterior gastro-enterostomy is too severe an operation for cases of congenital pyloric stenosis who have been brought too late to the surgeon. He has, therefore, devised a new operation of pyloroplasty, of which his description, as detailed in one case, is as follows: An incision, 1 in. above the umbilicus, along the right rectus, and 1 in. in length, was made through the skin. This was retracted, and a slight curved incision was made through the anterior sheath of the rectus. This was carried through the abdominal wall to the peritoneum, and the peritoneum opened. A fine gauze sponge was placed immediately into the abdomen to prevent evisceration. A fine catheter was now passed by mouth into the stomach to allow the collapse of the enormously distended stomach. A small retractor was placed in the right side of the incision, and slow traction was made. With the index finger hooked into the lesser curvature the hypertrophied pylorus was delivered into the wound without bringing any other portion of the stomach or bowels into the wound. The pylorus was now grasped between the thumb and index finger and a longitudinal incision was made over the upper anterior quadrant of the pyloric tumour, and slightly beyond each end of it, down to the mucosa. The hypertrophied musculature cannot be everted so easily as

described in pyloric closure, but one side of the musculature can be grasped with fine gauze by the assistant, while the operator makes pressure with the thumb and index finger from below. Then a Kocher dissector, with the aid of the scalpel, was used to free the mucosa from each side of the divided muscularis until it was almost completely shelled out. The mucosa separates very easily; in fact, much easier than it does on the normal pylorus. The muscularis was now everted as much as possible, and a very fine scalpel was used to divide the muscle tumour longitudinally into two layers of equal thickness, a deep and a superficial, and the incision thus made was carried lateralward by a specially constructed angle knife almost to the edge of the divided muscle tumour. This newly made flap was everted. The opposite side was then treated in the same way. The everted edges were closed with No. 00 fine waxed silk interrupted sutures. A small piece of free transplant from the great omentum was sutured with four interrupted waxed silk sutures over the pylorus to cover the raw surfaces. The entire operation did not take over ten minutes, and seemed to be devoid of shock. The abdomen was closed with a slight imbrication of the walls, as one would use in an inguinal hernia Interrupted chromic catgut was used, and also two tension sutures of heavy waxed silk. The advantages of the operation are: (1) The incision is very small; (2) time is saved and shock is avoided; (3) all conditions so far found in congenital pyloric stenosis can be dealt with; (4) the satisfactory result; (5) the anatomical relation of the stomach to the bowel is preserved, thus favouring the development of the liver and pancreas.

T. R. Whipham.

Appendicitis in hernial sac of a nursling (*'Med. Journ. of Austral.,'* 1915, II, *p.* 365.—**H. S. Stephens.**—A baby boy, aged 3 weeks, was operated upon for this condition with success. F. R. B. Atkinson.

Appendicitis with cæcum on the left side (*'Med. Journ. of Austral.,'* 1916, I, *p.* 160).—**H. Smith** found on operation for appendicitis, the above condition with no real ascending or transverse colons, the small intestine occupying the right iliac fossa and the site of the cæcum, ascending and transverse colons. F. R. B. Atkinson.

Intussusception (*'Boston Med. and Surg. Journ.,'* 1915, CLXXIII, *p.* 879). —**W. E. Ladd.**—Since 1908 sixty-three cases have been operated on at the Boston Children's Hospital, with a mortality of just below 49 per cent. Among the last nineteen cases the mortality was 21 per cent. Among eighteen cases operated on at the end of twenty-four hours the mortality was 16·66 per cent., among thirteen cases operated on at the end of thirty-six hours it was 54 per cent., and among seventeen cases operated on after sixty hours 88 per cent. Forty-nine occurred during the first year of life, eight during the second, and six between 3 and 9 years. Intussusception was much more frequent among healthy and well-nourished than in more poorly developed and nourished. J. D. Rolleston.

Intussusception in an infant (*'Med. Journ. of Austral.,'* 1915, II, *p.* 50). —**A. B. Brockway** records recovery from this condition in a babe, aged 3 days, by excision of a portion of the protruding gut about the size of a thumb-nail. F. R. B. Atkinson.

Enteric intussusception (*'Edin. Med. Journ.,'* 1916, I, *p.* 275).—**J. Fraser** gives detailed clinical histories of two cases in boys aged 3½ and

9 years respectively. Resection of the gut had to be performed in both instances, and in both complete recovery followed. The history is of a chronic and somewhat gradual type; further, it is recurrent. These facts are in keeping with what one knows, from a pathological view, is occurring. Before an enteric intussusception becomes definitely established, temporary invaginations occur, and these are evidenced by the recurrent spasms which the history usually notes. The mobility of the small intestine is such that interference with the blood supply, strangulation, and complete obstruction is more delayed than in the common ileo-cæcal and ileo-colic varieties, and therefore the progress of the disease is decidedly gradual and subacute. The age of the patient is instructive. The common types of ileo-cæcal and ileo-colic varieties occur usually during the first year of life; here we have cases occurring at later and such divergent periods as 3½ and 9 years. But perhaps the most distinctive feature is the absence of blood in the stools. It would appear that the passage of blood is prevented for two reasons: partly by the ileo-cæcal valve, which probably is spasmodically contracted, and partly by the kinking of the bowel which occurs secondary to the volvulus which so commonly complicates an enteric intussusception. A case which possesses the clinical features of intussusception and yet shows no blood in the stools is almost certainly enteric in type. There is very little that is distinctive in regard to the pathology, beyond reiterating the fact that an enteric intussusception is very frequently complicated by a secondary volvulus of the intussuscepted part. J. Allan.

Intussusception of the vermiform appendix (*'Lancet,'* 1916, I, *p.* 866).—**W. A. Curry** and **E. H. Shaw** report this case in a girl, aged 8 years, who was admitted to hospital with acute abdominal symptoms which suggested either appendicitis with abscess or intussusception. At the operation, on introducing the hand into the peritoneal cavity, a mass was distinctly felt in the right hypochondriac region. On delivery it proved to be an intussusception of the appendix into the cæcum, which had increased in size at the expense of the cæcum. The cæcum had a well-developed mesentery, and was very mobile. The intussusception was readily reduced by compressing the apex until the proximal ¾ in. of the appendix was reached. The appendix could not be further reduced because of the firm adhesions uniting the peritoneal surfaces. The adhesions were separated by means of a probe without any effect. The outer portion of the cæcal wall was œdematous, and its peritoneal covering presented a split about 1 in. in length. The cæcum was shut off by means of an intestinal clamp, and the appendix excised, together with about 1 in. of the surrounding cæcal wall. This was closed by a continuous through-and-through stitch of catgut and then buried by interrupted Lembert stitches. The split in the peritoneal coat was also covered in by a few Lembert stitches. The patient made an uneventful recovery. A description of the naked eye and microscopic appearances of the specimen is given. J. Allan.

Multilocular lymphatic cyst of the meso-colon (*'La Pediatria,'* 9 15, XXIII, *p.* 641).—**U. de Conciliis** reports the case of a boy, aged 9 years, admitted for severe abdominal pain for fifteen days previously. There was an ovoid swelling in the umbilical and epigastric regions extending to the left hypochondrium. The tumour at the operation was found adherent to the parietes and transverse colon. At first sight it appeared to be a multilocular lymphatic cyst, but the peculiar structure of the connective

tissue, the presence and arrangement of muscular fibres, the abundance of blood-vessels, and especially the presence of other dilated lymphatic cavities in the form of small cysts, and also the marked development of the perivascular lymphatic spaces and the proliferation of endothelial elements in all these cavities led the author to decide that it was a true neoplasm.

VINCENT DICKINSON.

A case of general pneumococcal infection (*'Med. Journ. of Austral.,'* 1915, I, *p.* 325).—**D. A. Cameron.**—A girl, aged 7 years and 4 months, suffered from suppurative appendicitis, the pus removed containing abundant pneumococci, followed by abscesses in the right and left pleural cavities and around the left hip. Vaccine treatment was valueless. Recovery ultimately occurred.

F. R. B. ATKINSON.

A case of abnormal anus (*'Brazil-medico,'* 1915, XXIX, *p.* 235).—**A. Silva.**—The patient was a female infant, aged 7 months, whose anus opened into the vagina a little below the hymen. As she was a well-nourished child and had never presented any symptoms of anal stricture it was decided to postpone operation for transplantation of the anus.

J. D. ROLLESTON.

Congenital perineal testicle (*'Journ. Amer. Med. Assoc.,'* 1915, LXV, *p.* 1176).—**G. M. Loewe** reports the case of a boy, aged 12 years, whose right testis was in the perineum 5 cm. anterior to the anus, and 2 cm. to the right of the median raphé. Absence of the testis from the scrotum had been noticed two weeks after the lad's birth. An operation for replacement was successfully undertaken.

T. R. WHIPHAM.

Strangulated Fallopian tube, ovary, and intestine in an infant (*'Journ. Amer. Med. Assoc.,'* 1916, LXVI, *p.* 813).—**G. Abelio** reports the case of an infant, aged 11 months, who three months previously developed an inguinal hernia on the right side. This was successfully reduced on four occasions, but finally became strangulated. At the operation the sac was found to contain a congested ovary, the Fallopian tube, and a knuckle of intestine. The parts were returned, and convalescence was uneventful.

T. R. WHIPHAM.

Congenital metapodial brachymelus (*'Thèses de Paris,'* 1915–16, *No.* 14).—**P. Bellanger.**—This condition, described by P. Chevallier in 1910, is characterised by congenital shortening of the metacarpals and metatarsals. In the hand the affected finger seems to be drawn back into the hand. The movements of the finger are normal, but the movements of the first phalanx are somewhat impeded. In the foot the toe is club-shaped, and generally pushed back towards the dorsal surface. The malformation does not interfere with walking. X rays show that the metacarpal or metatarsal is shortened by at most one-third. The diaphysis is often slightly incurvated and the head is more or less flattened and broadened. The phalanges are sometimes affected, but almost always very slightly. The malformation is congenital but is increased slightly by an early union of the epiphysis. One or more bones of the metacarpus or metatarsus may be affected. Owing to circulatory conditions the fourth metacarpal or metatarsal is most frequently affected. The anomaly is often hereditary or familial. There is a definite predilection for the female sex. Other malformations may co-exist, especially brachymesomelus, because it forms a sort of transition with achondroplasia. The pathogeny is obscure. The deformity of the finger may be treated by section of the bone and by bone grafting.

J. D. ROLLESTON.

Congenital absence of patellæ (*'Journ. Amer. Med. Assoc.,'* 1915, LXIV, *p.* 2062).—**G. Rubin** reports the following cases: (1) A woman, aged 33 years, whose mother had no thumb-nails. In the patient herself the thumb-nails are practically absent, some horny tissue only being present near the matrix. The right patella is about half the normal size; the left is no larger and is displaced, but the latter condition is due to an accident. (2) Her son, aged 10 years, in whom both patellæ were absent as shown by X rays. Thumb-nails normal. (3) Her daughter, aged 4 years, who also presented absence of both patellæ. Thumb-nails partly developed. The mother had had rickets, and both the children showed signs of the disease. The author refers to Little's cases in which absence of patellæ and thumb-nails were found in a family of four generations. [*Cf.* also Firth's case in BRITISH JOURNAL OF CHILDREN'S DISEASES, 1912, IX, *p.* 305.—ED.]

T. R. WHIPHAM.

Retarded ossification as an ætiological factor in traumatic arthritis and epiphysitis (*'Journ. Amer. Med. Assoc.,'* 1916, LXVI, *p.* 868).—**J. McW. Berry** quotes cases to show that retarded ossification may be an ætiologic factor in the production of traumatic arthritis and epiphysitis in children. The trauma, in such cases, consists in overstrain of the joints due to abnormal activity. The child may be leading the normal active life of a child of his own age, but anatomically he belongs to a type several years younger and, to avoid strain, his activities should be correspondingly restricted. Cases of this character are probably quite common, and are very apt to be overlooked or wrongly diagnosed. T. R. WHIPHAM.

Case of osteomyelitis with pyæmia (*'Edin. Med. Journ.,'* 1915, II, *p.* 18).—**D. M. Lyon** reports this case in a girl, aged 11 years, who succumbed after an illness of about five weeks' duration. The clinical history is given, and the post-mortem findings are fully detailed. Death was due to toxæmia and exhaustion, and was accelerated by interference with cardiac action by pericardial effusion and a large abscess in the heart wall. The condition began as a septicæmia, with staphylococci in the circulating blood. This was followed by acute osteomyelitis in several of the bones, and after a rather long interval (eighteen days) general pyæmia occurred with the formation of abscesses in the internal organs. Throughout the disease there was a varying degree of toxæmia. J. ALLAN.

Osteomyelitis of the femur following typhoid fever (*'La Med. de los Niños,'* 1915, XVI, *p.* 252).—**J. Montobbio y Hospital**—A boy, aged 12 years, who had recovered from Pott's disease two years previously, developed osteomyelitis of the left femur in convalescence from typhoid fever. The abscess was opened, and sequestra were removed. Typhoid bacilli were found in the pus. Considerable improvement followed the operation (*cf.* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1915, XII, *p.* 316).

J. D. ROLLESTON.

Congenital anterior curvature of the spine (*'Journ. Amer. Med. Assoc.,'* 1916, LXVI, *p.* 736).—**S. Kleinberg** reports the case of a female infant, aged 4 months, who presented a lordosis which was apparently present at birth and not secondary to any other condition. In this instance heredity played no part, and despite the marked lordosis there was no albuminuria.

T. R. WHIPHAM.

Spina bifida (*'Boston Med. and Surg. Journ.,'* 1916, CLXXIV, *p.* 420).—**B. B. Cates** has operated on sixteen cases, aged from 21 days to 34 years, of whom ten survived beyond a period of three months. Of these ten, one died four months and one eight months after the operation, of pneumonia, and one six months after the operation, of hydrocephalus. Seven are living who were operated on from eight years to twenty months previously.

J. D. ROLLESTON.

A curious case of myelo-cysto-meningocele (*'Gaz. hebd. des Sci. Méd. de Bordeaux,'* 1915, XXXVI, *p.* 124).—**Petit de la Villéon** records a case in a girl, aged 10 years. At birth the tumour was the size of a pigeon's egg, but it progressively increased until its horizontal circumference was 37 cm. and its vertical circumference 33 cm. It was implanted by a pedicle 51 cm. broad on the lumbo-sacral region, and was fluctuating, transparent, and irreducible. Apart from a few varicose veins, the skin over it was normal. There was no malformation or trophic trouble in the lower limbs. Vesical and rectal incontinence had been present since birth. The tumour on removal weighed 1 kilo 650 grm. Complete recovery took place. J. D. ROLLESTON.

Surgical treatment of hydrocephalus (*'Interstate Med. Journ.,'* 1916, XXIII, *p.* 89).—**C. M. Remsen** favours the method of von Bramann, which is simple in the extreme as compared with other devices whereby the distended ventricles are relieved of their obstruction, whether it be in the foramina or aqueduct, or due to venous pressure in the posterior fossa, or whether it be an essential choroidorrhœa (with the characteristic changes in the ependymal cells) with a tentorial aperture obstruction. A simple craniotomy posterior to the coronary suture, which may be performed under local anæsthesia, allows entrance to the side of the superior longitudinal sinus. A blunt-pointed cannula is inserted — carefully avoiding the longitudinal sinus—along the side of the falx into the longitudinal fissure until the corpus callosum or roof of the distended lateral ventricle is encountered. On puncturing this body, the underlying fluid is allowed to escape into the subarachnoid space and becomes in relation with the superior longitudinal sinus and the cortex. This equalises pressure, and reduces conditions by short circuit almost to a normal state. The ventriculostomy is lengthened to about 1 cm. and, since the pressure is constant here in the presence of secretory activity, the opening is kept patent by the continual escape of the fluid. Theoretically, with the simplicity of these procedures under careful aseptic surroundings, this is clearly the course to follow as being the simplest, not only in the hydrocephalus of an obstructive type, but also in the essential choroidorrhœa of infancy *before cerebral destruction* has occurred, and in the hydrocephalus associated with tumor cerebri, to remove the causes of the blindness, choked disc, headache, and cerebral anæmia, or possibly to clear up a topical diagnosis, the symptons of which are clouded by the hydrocephalus tension—a truly decompressive measure of a simple type, to be essayed before the typical partial craniectomy—provided the tumour is irremovable. In certain cases of recurrence, due possibly to closure of the ventriculostomy opening, it is possible that the insertion of a permanent drainage cannula might perhaps reduce still further the percentage of failures in this operation. T. R. WHIPHAM.

Correspondence.

ROYAL MEDICAL BENEVOLENT FUND.

To the Editor of The British Journal of Children's Diseases.

Dear Sir,—The Royal Medical Benevolent Fund, the great benevolent society of the medical profession, is sorely in want of money now.

Though in ordinary times the medical profession supports its own poor, in these war times this is no longer possible. At the May meeting the Committee had a balance of only £17 in hand and at the June meeting was faced with a deficit of £16. The demands were heavy and had to be met, and this could only be done by withdrawing £500 from the bank.

As the direct outcome of the war, not only are the ordinary cases of poverty greatly increased in number, but an entirely new class of case has arisen urgently requiring relief, in which without actual poverty there is great temporary distress—distress, however, which it is hoped will relieve itself soon after the war is over and the doctors serving return to their civil duties.

At the outbreak of war the medical profession responded freely to the nation's call. The Territorial Medical Officers were at once called out, and other medical men volunteered. Both alike had to leave their practice at very short notice, and often without being able to make adequate provision for its continuance and maintenance during their absence. Their pay went but little way to supply the loss which their absence entailed, for the working expenses of the practice could not be materially reduced. The result was that many families found themselves in very straitened circumstances. Rent, rates and insurance brook no delay, but worst of all school bills could not be paid, and if help had not been quickly forthcoming the children would have suffered for the patriotism of their father.

The following are typical of the cases with which our Fund has had to deal:

A young doctor who had only been in practice a few years volunteered for service, and was killed in action a few days later. He left a widow, aged 35 years, with two young boys, aged 3½ and 1 year, entirely without means. The Fund voted £25 for her immediate necessities, and put her into communication with the Officers' Families Association, which gave further help.

A practitioner, aged 38 years, earning £700 to £800, volunteered for service, leaving his practice in the hands of a neighbour, who was not a success. There were two young children, and another baby was born shortly after the husband left. The wife contracted pneumonia and nearly died. A resident patient had to leave the house. Rent and other expenses led to a debt of about £80. This the doctor could not meet, and he hurried back from the trenches to save his home from being sold up. The Fund voted £25, the Guild gave £15, the Officers' Families Association £25, and the Professional Classes War Relief Council further help, with the result that he returned to the Front with his immediate anxieties relieved.

A captain in the Territorials was called out and had to leave his practice in the hands of a *locum*, who proved a failure. There were seven children, aged 2 to 14 years. Financial difficulties arose and payment of the school fees became impossible. Between the Fund and Guild and

Officers' Families Association the necessary fees were raised, and clothing, which was greatly required, provided.

These cases show well the way in which the Fund works, not only by giving relief itself in money and kind, but also by obtaining, through co-operation with other benevolent societies, more substantial assistance than it could afford alone.

But there is another class in which the distress is perhaps even greater and adequate relief more difficult. It is that of men who left home and a good practice in vigorous health and who have come back, crippled by wounds or with health impaired, to a practice severely damaged by their absence, and without the strength or energy to regain the practice and position which they sacrificed.

Our Fund has set apart a special sum to meet emergency claims of this kind, yet the demands are so great that it will soon be exhausted. We cannot now rely on the profession alone to supplement it largely, for the medical profession, like all other professions, is hit very hard by the war and has no longer its old resources to draw upon.

What is required is an Emergency Fund large enough to deal adequately with these emergency cases arising directly out of the war, and for this we are driven to appeal to the public as well as to our own profession.

We trust that our appeal will meet with a liberal response both from the public and from the medical profession, for unless fresh funds are quickly forthcoming it will be impossible to continue the relief which is so urgently required.

We are, faithfully yours,

JOHN TWEEDY, *President.*
SAMUEL WEST, *Hon. Treasurer.*
G. NEWTON PITT, *Hon. Secretary.*

11, Chandos Street,
Cavendish Square,
London, W.

Reviews.

I.K. THERAPY IN PULMONARY TUBERCULOSIS, WITH A SUMMARY OF CASES AND 42 ILLUSTRATIVE CHARTS. By WILLIAM BARR, M.D. Bristol: J. Wright & Sons, Ltd., 1916. 8vo, pp. 82. Price 3s. 6d. net.

AMONG the less well-known forms of tuberculin, so far as this country is concerned, is Carl Spengler's preparation known as I.K., or Immunkörper, immune substances. It came out in 1907, and consists of the diluted and acidified blood of rabbits that have received intra-muscular injections of tubercle bacilli and the other bacilli associated with them in secondary infections of phthisical lungs. It is claimed that I.K. contains lysins that destroy these bacteria, and antitoxins that neutralise the toxins set free by this lysis. Hence, when injected into human beings, I.K. produces a passive immunity; the human tissues are thus enabled to devote their attention to the production of an active immunity, although the I.K. contains no active immunising agent. Hence it is said that I.K. produces primarily a passive immunity to tuberculosis, and secondarily an active immunity. Be this as it may, I.K. has been highly praised by some of its users, and Dr. Barr

tabulates results shown by patients of his who have received ambulant I.K. treatment since October, 1913. Dr. Barr speaks highly of I.K. in the treatment of almost all forms of phthisis; he does not place absolute reliance on it, and in his own work he uses tuberculin—he does not say which tuberculin—almost as extensively; both, he says, have their limitations. In general, I.K. should be administered by hypodermic injection; but it can also be given with success by the mouth, as it appears not to be broken down in the process of gastro-intestinal absorption. The initial doses are minute; successive doses are each larger than the last, if all goes well, and given at intervals of a week or fortnight for at least six months. The injections should be begun again if the patient does not get on subsequently. Overdoses of I.K. show themselves by the production of general, focal, and local reactions, and are undesirable. The treatment is contra-indicated in cases of phthisis that are very far advanced, or are complicated by extreme anæmia, heart disease, or cachexia. Dr. Barr gives full directions as to the choice of cases for I.K. therapy, the troubles that may arise in its employment, and its use in dispensary, sanatorium, hospital, and domiciliary treatment. In the case of young children the I.K. can be given by the mouth, and this method of administration is recommended in acute forms of phthisis in the young. Dr. Barr finds that most patients appreciate I.K. treatment, which shows that at any rate they derive subjective benefit from it. The treatment improves the appetite and lessens the sputum and fever. Dr. Barr naturally hesitates to commit himself to any attempt to prove the curative powers of I.K. by statistics, but makes it clear that his extensive experience leaves him convinced of the efficacy of the preparation. His book is clearly and temperately written, and makes out a good case for the further trial of I.K. It should be in the hands of all who have to treat phthisical patients.

A. J. J.-B.

Fool Culture: On Education, Culture, Misgovernment, and Destiny. A Call to Repentance. By Kirton Varley. London: The Generation Press Co. Pp. 109. Price 2s. 6d. net.

In this book the author attempts to show the inherent fallacy of our modern "scholastic or latinised education," which he considers to be nothing more or less than an "antipathetic pedagogy." Such an education, according to his view, produces merely "scholars and priests, poets and thinkers," instead of men of energy and action, capable of carrying on the work of the nation. Mr. Varley can see apparently no advantages accruing from a classical education, but he adduces little real argument against it, and only inveighs with a continual iteration of words against the system and the Government, which in his opinion is its outcome. What he has to suggest in its place is the introduction of the Montessori system of education for children, and the establishment of gymnasia for specialised training at a later age.

We venture to doubt, however, whether the book will serve the author's or any other purpose. It is written in a verbose and involved style, which aims at being erudite, but merely renders the author's meaning frequently obscure, and is very wearisome to the reader. Notwithstanding his efforts to be literary, Mr. Varley is guilty of at least one split infinitive and of treating *data* as a singular noun, which goes to prove that a "latinised education" is not without its use for writing correct English. On p. 76 occurs the word "ossefying," but this it is only charitable to suppose is a misprint.

The author acknowledges that his book was rejected by three publishers, and we can well believe it.

T. R. W.